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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,980	03/12/2004	Brian E. Turung	BETT 2 13280	9029

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EXAMINER

BROADHEAD, BRIAN J

ART UNIT PAPER NUMBER

3661

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/799,980

Applicant(s)

TURUNG, BRIAN E.

Examiner

Brian J. Broadhead

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 23-64 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 23-27, 31, 32, 34-36, 39, 40, 44-48, 52, 53, 55-57, 60 and 61 is/are rejected.
- 7) ☒ Claim(s) 28-30, 33, 37, 38, 41-43, 49-51, 54, 58, 59 and 62-64 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 23-26, 34-36, 39, and 40 are rejected under 35 U.S.C. 102(b) as being anticipated by Schanzer (US003945593A) .

3. Per claim 23, Schanzer teaches a flight control apparatus that includes a comparator device that compares actual flight parameter data to predefined flight parameter data (18, 24; figure 1), and a navigational controller (26, 28, 30; figure 1) that takes control of at least one navigational control of the aircraft after the data deviates beyond a defined value (20, 22; figure 1).

4. Per claims 24 and 25, Schanzer teaches that the flight parameter data includes altitude (16, figure 1) and aircraft orientation (10, figure 1 ).

5. Per claim 26, Schanzer teaches controlling the navigation control to cause the deviation to cease deviating (column 4, line 50 - column 5, line 23).

6. Per claim 34, Schanzer teaches that the navigation control includes control of throttle, elevator, and spoiler (column 6, lines 43-49).

7. Per claim 35, the system of Schanzer is located within the cockpit (20, 22; figure 1) and parts outside (26, 28, 30; figure 1).

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8. Per claim 36, Schanzer teaches three servomotors to perform the control such that any one can still perform the functions of the invention if one fails.

9. Per claims 39 and 40, Schanzer teaches defined values (column 6, line 35 and 38) that may be constant or changing depending on the actual flight of the aircraft.

10. Claims 44-48, 52, 53, 55, 56, 60, and 61 are rejected under 35 U.S.C. 102(b) as being anticipated by Bice et al. (US004924401A).

11. Per claim 44, Bice teaches a method of at least partially controlling an aircraft that has deviated from at least one predefined flight parameter including at least one predefined flight parameter for at least a portion of the flight path into a database (column 13, lines 56-66), monitoring at least one flight parameter during the flight of the aircraft, comparing at least one predefined flight parameter, and causing an emergency navigational system to activate a navigational controller (column 4, lines 4-47).

12. Per claims 45 and 46, the flight parameter taught in Bice is altitude.

13. Per claims 47 and 48, Bice teaches that the control causes the aircraft to deviate from the flight path and take a new flight path to avoid impacting the ground.

14. Per claim 52 and 53, Bice teaches a digital data storage database that is customarily removable from the vehicle, such as optical media (CDROM, DVD, etc.).

15. Per claim 55, Bice teaches that the navigational control at least includes control of the aircraft flap (column 5, lines 15-19).

16. Per claim 56, the system of Bice is located within the cockpit (column 5, lines 21-29) and parts outside (column 5, lines 30-32).

17. Per claims 60 and 61, Bice teaches defined values (column 14, lines 49-52) that may be constant or changing depending on the actual flight of the aircraft.

***Claim Rejections - 35 USC § 103***

18. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

19. Claims 27, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schanzer in view of Bice.

20. Per claims 27, 31 and 32, Schanzer teaches the invention as explained in the rejection of claim 23. Furthermore, Schanzer teaches that one of the parameters to be monitored is the aircraft altitude (16, figure 1), with a commanded value input (22, figure 1). However, Schanzer does not teach a database and following a new flight path. Bice teaches a digital data storage database (column 13, lines 40-66) for terrain data useable for altimeter information that is customarily removable from the vehicle, such as optical media (CDROM, DVD, etc.); and following a new predefined flight path (figure 4). It would have been obvious to one of ordinary skill in the art, at the time of invention, to include a database for flight parameter information and flight path in the system of Schanzer, in order to aid in the setting of a commanded value and to control recovery of the original flight path.

21. Claim 57 is rejected under 35 U.S.C. 103(a) as being unpatentable as obvious over Bice.

22. Per claim 57, Bice teaches the invention as explained in the rejection of claim 44. Bice does not teach a secondary emergency navigational system. However, providing

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redundancy of flight control elements in the avionics industry would have been well known to one of ordinary skill in the art at the time of the invention. Flight controls are of critical importance and in case of failure backup systems are commonly provided. It would have been obvious to one of ordinary skill in the art, at the time of invention, to provide for a redundant system in Bice, in order to provide for a backup in the case of failure, as is well known and commonly found in aircraft flight control systems.

***Allowable Subject Matter***

23. Claims 28-30, 33, 37, 38, 41, 42, 43, 49, 50, 51, 54, 58, 59, and 62-64 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

24. Applicant's arguments filed 4-13-06 have been fully considered but they are not persuasive. The argument that Schanzer always control the flight path is not convincing. If the plane is following the correct flight path there is no reason for the invention of Schanzer to intervene. Schanzer also discloses using the system with a autopilot, autopilots have predefined flight data for specific locations. Autopilots also have constant and not constant flight parameters.

25. With regards to Bice, the argument that Bice lacks predefines flight parameters that correspond to a particular location is not convincing since Bice contains a ground collision avoidance system with a terrain database. Flight altitudes are going to be set according to the terrain database.

26. Applicant's arguments with respect to claim 27 have been considered but are moot in view of the new ground(s) of rejection. Bice has been cited for the predetermined flight path because they provide for a "flyup".

***Conclusion***

27. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Broadhead whose telephone number is 571-272-6957. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black can be reached on 571-272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
BJB

  
THOMAS BLACK  
SUPERVISORY PATENT EXAMINER  
JAN 10 2007